REMARKS

The Office Action dated July 28, 2009, has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1 and 4-25 are currently pending in the application, of which claims 1 and 11 are independent claims. Claims 1, 4-6, 11-12, 14, and 16 have been amended to more particularly point out and distinctly claim the invention. No new matter has been added. Claims 1 and 4-25 are respectfully submitted for consideration.

Claims 1, 4-12, and 14-25 were rejected under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over U.S. Publication No. 2002/0165790 of Bancroft *et al.* ("Bancroft") in view of U.S. Patent No. 6,976,032 of Hull *et al.* ("Hull"). The Office acknowledged that Bancroft does not disclose all of the features of the rejected claims, but cited Hull to remedy Bancroft's deficiencies. Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in the cited art.

Claim 1, upon which claims 4-10, 22, and 24 depend, is directed to a receptionist robot system. The system includes a traveling robot including autonomous traveling means for traveling autonomously and recognition means for recognizing a guest at least according to image information. The system also includes management database means configured to communicate with the robot and provided with a database containing identification information to identify the guest recognized by the recognition means, the management database means being configured to retain and update individual personal

information and schedule information for identifying the guest. The guest is identified at least according to information obtained by the recognition means and management database means. The traveling robot further includes dialog means for communicating with the guest recognized by the recognition means and response means for determining the contents of communication with the guest according to an identity of the guest recognized by the recognition means and associated information from the management database means. The response means is configured to determine vacancy of a facility according to information obtained from the management database means, determine a relative coordinate of a position immediately in front of the vacant facility, and execute a movement process of the robot according to this coordinate.

Claim 11, upon which claims 12-21, 23, and 25 depend, is directed to a receptionist robot system. The system includes a traveling robot configured to travel autonomously. The system also includes management database means configured to communicate with the robot and provided with a database configured to retain and update individual personal information and schedule information for identifying a guest. The traveling robot includes recognition means for recognizing the guest at least according to image information, and response means for determining an action to conduct the guest recognized by the recognition means. The management database means is communicably connected with input means for inputting the schedule information and notification means for notifying the arrival of the guest to a host according to the action of the response means with respect to the guest. The traveling robot further includes dialog

means for communicating with the guest recognized by the recognition means and response means for determining the contents of communication with the guest according to an identity of the guest recognized by the recognition means and associated information from the management database means. The response means is configured to determine vacancy of a facility according to information obtained from the management database means, determine a relative coordinate of a position immediately in front of the vacant facility, and execute a movement process of the robot according to this coordinate.

Applicants respectfully submit that the claims recite subject matter that is neither disclosed nor suggested in the cited art.

Bancroft generally relates to methods for facilitating a retail environment. Bancroft provides a variety of processes that may be performed by a mobile retail system or a mobile robot system. In one example, Bancroft provides a method that includes providing a mobile system for operation in the retail environment, the mobile system including a processor portion, a memory portion storing retail data relating to retail activity, the processor portion storing data in the memory portion and retrieving data from the memory portion, an interaction portion, and a transport portion. The method further includes the mobile system traveling from at least a first location to a second location. The method additionally includes monitoring the retail environment by the mobile system. Finally, the method includes accepting input from a customer in the retail environment by the mobile system.

Bancroft fails to disclose or suggest, "the response means is configured to determine vacancy of a facility according to information obtained from the management database means, determine a relative coordinate of a position immediately in front of the vacant facility, and execute a movement process of the robot according to this coordinate," as recited in claim 1 or "the response means is configured to determine vacancy of a facility according to information obtained from the management database means, determine a relative coordinate of a position immediately in front of the vacant facility, and execute a movement process of the robot according to this coordinate," as recited in claim 11.

Bancroft's robot is, as noted above, directed to facilitating a retail environment. Accordingly, even if Bancroft's robot could be viewed as having some "receptionist" characteristics as that term would be broadly understood (not admitted), it is not a corporate receptionist robot, and does not have the functions of directing guests to facilities such as rooms.

The Office Action took the position that the robot system of Bancroft is able to deal with every possible situation in a "retail environment." On the other hand, the robot system of certain embodiments of the present invention is configured to be useful in "corporate environments" such as corporate headquarters and offices.

Indeed, because Bancroft is directed to a robot used in a retail environment, Bancroft's robot is designed for and presented with a totally different set of tasks from that addressed by various embodiments of the claimed receptionist robot system. For

example, the traveling robot of claim 1 is interested in the **vacancy of a facility**, but no such consideration is made when conducting a retail customer to a prescribed part of a shop. In fact, quite to the contrary, a vacant part of a retail shop is not of interest to a retail customer. Furthermore, the system of claim 1 includes a database that retains schedule information for identifying a guest. A retail customer does not typically visit a shop on appointment, and Bancroft's robot does not look up any schedule when dealing with a retail customer.

The closest similarity in Bancroft appears to be where Bancroft's robot directs a customer to the location of a particular desired good within a retail store. This location, however, cannot reasonably be considered **a vacant facility** (quite the opposite!), and the robot in Bancroft is not directing the customer to the location by reference to the coordinates of a vacant facility.

The Office Action, at pages 10-11, stated that Bancroft, at paragraph [0032], "specifically describes the plurality of facilities to which the robot system is applicable in regards to the retail application." (Office Action, page 10) The Office Action continued by quoting paragraph [0032] of Bancroft, which states:

> As used herein, the term "retail" or "retail sales" or "retail environment" is defined as activity relating to, but not limited to, the sale of goods or commodities or any other items, or providing any type of services, for example, to a person, such as in store, in a circus, a factory, warehouse, shop, mall, fair, outside market, display area, hospital, law firm, accounting firm, restaurant, commercial office space, convention center, hotel, airport, arena, stadium, outdoor venue or any other area either inside a structure or outside in which goods, commodities or services are provided, manufactured, stored, sold, offered for sale, displayed in anticipation of

future sales, or displayed, such as for any type of promotional activities, for example.

The Office Action then concluded by asserting that "Bancroft clearly provides support for the robot to be used to conduct the guest to a prescribed facility according to the utilization status of the facility." The Office Action's reasoning, however, is mistaken.

Although Bancroft mentions that the robot system can be used in various environments, Bancroft only indicates that any given robot system would be used in a single one of those environments. In other words, there is nothing in Bancroft that would suggest to one of ordinary skill in the art that any particular robot would be able to direct guests to more than one facility.

Claim 1, however, recites that "the response means is configured to determine vacancy of a facility according to information obtained from the management database means, determine a relative coordinate of a position immediately in front of the vacant facility, and execute a movement process of the robot according to this coordinate." There is no corresponding prescription of a facility according to a vacancy status of the facility in Bancroft, because it is assumed in Bancroft that the robot operates within a single retail environment (though that environment could be one of several different kinds) and because Bancroft's robot system is designed to facilitate retail commerce.

Bancroft's robot does not select one of a circus, a factory, a warehouse, a shop, *etc.* (as apparently assumed in the Office Action). Thus, the Office Action's reasoning

that the robot of Bancroft determines an action to conduct a guest to a prescribed facility according to the utilization status of the facility is mistaken. Furthermore, even if the robot of Bancroft were designed to select one of those facilities, there is nothing Bancroft that suggests to select such a facility, or to conduct a guest to it, based on "vacancy of a facility," as recited in claim 1. Furthermore, such a function would not be intuitive or otherwise obvious, because the robot would be expected to conduct a guest to one of a circus, a factory, a warehouse, a shop, *etc.* based on the desire of the guest, not based on the "vacancy of a facility," as recited in claim 1. Thus, although Bancroft's robot may be able to be implemented in a number of different environments, it does not have the capability to correspond to the features recited in claims 1 and 11, or in the claims that depend from them. Thus, the rejection is improper and should be withdrawn. Withdrawal of the rejection is respectfully requested.

In addition to the features discussed above (which can relate to both claims 1 and 11), claim 11 further recites, "wherein the management database means is communicably connected with ... notification means for notifying the arrival of the guest to a host according to the action of the response means with respect to the guest." These features of claim 11 are not disclosed in the cited art.

The Office Action cited various portions of Hull (having acknowledged that Bancroft does not disclose such features). Hull generally relates to a networked peripheral for visitor greeting, identification, biographical lookup, and tracking. According to Hull, a visitor kiosk for the capture and storage of personal information

about visitors is placed at the entry point to a facility being monitored. Each visitor signs in at the kiosk. Their business card and an image of their face can be scanned by the kiosk. If they do not have a business card, their name and company can be entered manually. They also enter the name of the person they are visiting and the purpose for their visit. The person they are visiting is notified of the arrival of the visitor by email or by voice telephone. The data about the visitor is stored locally or remotely. Automatic lookups of various information about the visitor are performed and communicated to the person being visited. A network interface allows users to enter information about visitors they are expecting to arrive. A telephone interface is provided for input of voice greetings as well as checking on the arrival status of visitors.

Thus, for example, if the person being visited is considered the "host" and the person visiting is considered the "guest," it would appear that Hull mentions some feature that might be thought to correspond to the claimed notification means (not admitted that this is the case). It would not, however, have been obvious to include such a notification means in the retail sales robot of Bancroft.

One reason it would not be obvious to include such a feature in the retail sales robot of Bancroft, is that a retail sales robot does not normally have to deal with the issue of visitors coming to see particular people. Indeed, Bancroft nowhere envisions such an application for Bancroft's robot, and there is nothing in Bancroft that would lead one of ordinary skill in the art to expect that Bancroft's robot would be improved by inclusion of the additional features of being able to tell someone that a visitor has arrived. Thus, the

rejection of claim 11 is improper and should be withdrawn. Withdrawal of the rejection of claim 11 is respectfully requested.

The Office Action provided two responses to this distinction at pages 11 of the Office Action at sections 26-27. At section 26, the Office Action argued that Hull teaches a notification means for notifying the arrival of a guest to a host. However, the Office Action has overlooked that claim 11 recites, not simply notification means for notifying the arrival of a guest to a host, but "notification means for notifying the arrival of the guest to a host **according to the action of the response means with respect to the guest**" (emphasis added).

Even if Hull could be thought to notify a "host" about the arrival of a "guest" it would not do so in Hull (or in any combination of Hull and Bancroft) according to the action of a response means with respect to the guest, where the response means is "for determining an action to conduct the guest recognized by the recognition means."

In certain embodiments of the present invention, the receptionist robot can conduct a visitor to a meeting room and, according to that action taken with respect to the guest, inform the host where the guest that the guest has arrived in the room to which the robot is conducting the guest. No corresponding disclosure exists in Hull, in Bancroft, or in any combination of Bancroft and Hull. Thus, the combination of Bancroft and hull cannot disclose or suggest "notification means for notifying the arrival of the guest to a host **according to the action of the response means with respect to the guest**"

(emphasis added) as recited in claim 11. Thus, the rejection of claim 11 is improper and should be withdrawn.

At section 27, the Office Action responded to the facts (demonstrated above) that the combination of Bancroft and Hull is improper, that the combination would not be made by one of ordinary skill in the art, and that the combined teachings of the references would not lead one of ordinary skill in the art toward the invention.

Specifically, the Office Action included Form paragraph 7.37.04 from MPEP 707.07(f), which explains the condition under which a combination is properly suggested. However, as that form paragraph and MPEP 2143.01 indicate, "obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art." The Office Action's proposed motivation is not found in the references themselves, nor in the knowledge generally available to one of ordinary skill in the art. Therefore, the rejection does not provide a *prima facie* basis for asserting obviousness, and should be withdrawn. Withdrawal of the rejection is respectfully requested.

In particular, the Office Action stated that "Bancroft specifically describes a robot or mobile kiosk system for facilitating a "retail environment" (defined as activity relating to, but not limited to, the sale of goods or commodities or any other items, or providing any type of service) and Hull clearly teaches kiosk type receptionist system with a

notification means for notifying arrival of the guest to a host." This recital of the alleged teachings of Hull and Bancroft, however, do not relate directly to the issue of teaching, motivation, or suggestion. Even if a combination of the reference would disclose every feature of the claimed invention (not admitted in this instance), that would not mean it was obvious to make the combination.

The Office Action continued by stating "One of ordinary skill would clearly recognize the advantages of modifying the system of Bancroft to include the notification means of Hull, so as to provide excellent customer service to a guest of any of the facilities described and defined by Bancroft's 'retail environment.'" This allegation, however, is not well supported by the references themselves. In particular, one of ordinary skill in the art would recognize that the robot in the retail environment of Bancroft is arranged to direct the customer to the goods or services he desires. In contrast, in Hull, a person to be visited is notified of the arrival of the visitor. Thus, there is a significant gap between the object of Hull and the object of Bancroft.

The Office Action attempted to bridge the gap between respective objects of Bancroft and Hull by stating that the motivation would be to provide "excellent customer service to a guest." The concept of providing "excellent customer service to a guest," however, is apparently taken only from the present application viewed in hindsight, and not in the references themselves, nor in the knowledge generally available to one of ordinary skill in the art.

Furthermore, there is no clearly articulated basis upon which the Office Action concludes that adding the functionality of Hull to that of Bancroft would enhance the customer service of Bancroft. After all, as far as can be determined from Bancroft's disclosure, the customers of Bancroft are not attempting to meet with a particular person. Thus, it appears that the additional functionality of Hull would be viewed by one of ordinary skill in the art as unnecessary and extraneous to the system of Bancroft, since it would be unused in the practical implementations of Bancroft's system. Accordingly, since common sense dictates against including extraneous functionalities, it would not have been obvious to combine Bancroft and Hull as proposed in the Office Action.

The above discussion addresses the deficiencies of the rejections particularly with respect to the independent claims. The same deficiencies exist with respect to the rejections of the dependent claims as well, since the dependent claims incorporate the limitations of the independent claims by reference. Withdrawal of the rejections of claims 4-10 and 12-25 is accordingly similarly requested.

Applicants note that, in particular, the rejection of claim 6 contains further errors. For example, the rejection of claim 6 asserts that "wherein the recognition means is [configured] to select a candidate or determine a priority order of a plurality of candidates according to the schedule information of the management database means," as recited in claim 6, is disclosed by Hull at the following locations: column 1, lines 42, to column 3, line 67; column 4, line 31, to column 4, line 35; column 6, line 30, to column 7, line 20;

and column 10, line 1, to column 12, line 11). This citation to several very large passages of Hull is the same as the citation used with respect to independent claim 1.

Upon careful review of the lengthy passages cited in the Office Action, there does not appear to be any disclosure in the cited passages of "wherein the recognition means is configured to select a candidate or determine a priority order of a plurality of candidates according to the schedule information of the management database means," as recited in claim 6. Furthermore, since accommodating visitors to a schedule (such as a room occupancy schedule) is not something that is discussed or hinted at in Hull, it would not have been obvious to add such a feature to Hull and/or to the combination of Bancroft and Hull. Thus, for this additional reason, it is respectfully requested that the rejection of claim 6 be withdrawn.

Claim 13 was rejected under 35 U.S.C. §103(a) as being allegedly unpatentable as obvious over Bancroft in view of Hull, as applied to claim 11, and further in view of U.S. Patent No. 6,144,180 of Chen, *et al.* ("Chen"). The Office Action acknowledged that the combination of Bancroft and Hull does not disclose all of the features of claim 13, but the Office Action cited Chen to remedy the deficiencies of the combination of Bancroft and Hull. Applicants respectfully traverse this rejection.

Claim 13 depends from and further limits claim 11. At least some of the deficiencies of Bancroft and Hull with respect to claim 11 have been discussed above. Chen does not remedy such deficiencies, and consequently the combination of Bancroft,

Hull, and Chen does not disclose or suggest all of the elements of any of the presently pending claims.

Chen relates to a mobile robot, but does not address the receptionist features discussed above, which is not surprising, because Chen was cited for other reasons. Therefore, the combination of Bancroft, Hull, and Chen fails to disclose or suggest all of the features of claim 13, and the rejection of claim 13 ought to be withdrawn. Withdrawal of the rejection of claim 13 is respectfully requested.

For the reasons set forth above, it is respectfully submitted that each of claims 1 and 4-25 recites subject matter that is neither disclosed nor suggested in the cited art. It is, therefore, respectfully requested that all of claims 1 and 4-25 be allowed, and that this application be passed to issuance.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by telephone, Applicants' undersigned representative at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, Applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,

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